INDEX 1953

VOLUME 34

GUIDE TO PAGE NUMBERS—January, 1-32; February, 33-62; March, 63-92; April, 93-124; May, 125-158; June, 159-188; July, 189-222; August, 223-266; September, 267-302; October, 303-338; November, 339-372; December, 373-406

'ACETIC Anhydride from Acetone,' 283
Acetone from cumene, 265
Acetylene:
  safe handling process, 151
  Wulff manufacturing process, 88
'Acetylene from Hydrocarbons,' 247
Acid handling, safer system, 119
Acid plants, Chemiebau plants to be made in U.K., 88
'Acid Recovery at a Solvents Plant,' 113
ACTH from ox glands, 35
Adsorption, kinetics of exchange, 322
Agricultural chemicals, Australia, 29
Air:
  disposal in radiochemical laboratories, 133
  driers, automatic, 147
  filter, plastic, 31
  control device, 215
Alcohol, French expert prices, 58
Alumina:
  from anorthosite, 305
  Jamaican production, 60
Aluminium:
  Australian production, 20
  Norwegian output, 88
  Norwegian plant, 333
  silver-plating process, 84
  U.S. industry, 157
  Volta River scheme, 2
Aluminium-coated steel, cheap method, 297
Ammonia synthesis, 54
Ammoniacal solutions, distillation, 54
Ammoniation of superphosphate, 196
Ammonium nitrate crystalliser, 172
Ammonium sulphate from petroleum residues, 171
A.P.V. Co.'s new factory, 213
Argentina, chemical expansion, 270
Asian coal and iron reserves, 126
Association of British Chemical Manufacturers, annual report, 368
Atomic energy:
  British programme, 160
  Indian plans, 35, 187
  irradiation of plastics, 340
  nuclear engineering:
    France, 303
    U.S.A., 370
  power station, Cumberland, 219
Australia:
  agricultural chemical production, 29
  ammonia oxidation plant, 60
  bauxite deposits, 90
  industrial projects, 20
  metals prospecting, 90
  uranium field, new, 336
Austria, plastics industry, 122
Autofining desulphurisation process, 180

'BATCH *v.* Continuous Distillation,' by S. R. M. Ellis and J. T. Shelton, 193, 280
Battery separators, 94
Bauxite, Australian discovery, 90
'Beer Conditioning and Cooling Plant, Reconstruction,' by A. G. Thomson, 203
Benzole, standards, 290
Board from wood waste, continuous process, 220
Boilers, research, 184
BOOKS REVIEWED:
  'Absorption and Extraction,' by T. K. Sherwood and R. L. Pigford, 91
  'Advances in Catalysis,' edited by Frankenburg, Komarewsky and Rideal, 28
  'Bibliography of Industrial Drying,' 47
  'Chemical Engineering Techniques,' by B. E. Lauer and R. F. Heckman, 146
  'Chemical Industries,' 23rd edition, 146
  'Engineers' Illustrated Thesaurus,' by H. Herkimer, 24
  'Glycols,' 47
  'Industrial Waste Treatment,' by E. B. Besselievre, 253
  'Introduction to the Study of Physical Chemistry,' by L. P. Hammett, 253
  'Materials Handling in Industry,' 39
  'Modern Chemical Processes,' 91
  'Organic Chemistry,' by L. J. Desha, 253
  'Organophosphorus Compounds,' by G. M. Kosolapoff, 181
  'Physical Chemistry Made Plain,' by J. H. Mandleberg, 181
  'Styrene,' by R. H. Boundy and R. F. Boyer, 150
  'Textbook of Organic Chemistry,' by G. H. Richter, 214
  'Thermal Diffusion in Gases,' by K. E. Grew and T. L. Ibbs, 146
  'Unit Processes in Organic Synthesis,' P. H. Groggins, 146
  'Vermiculite,' by E. R. Varley, 150
Brazil:
  alkali projects, 187
  caustic soda plant, 156
  fertilisers, apatite reserves, 371, 399
  manganese development, 89
  newsprint production plans, 301
Bread, white, new machine dispenses with agene, 86
Brewery reconstruction, 203
Brick kilns, waste heat recovery, 84
Bricks from lime sludge, 221
'British Chemical Plant Industry and Exhibition,' by Dr. E. H. T. Hoblyn, 228
British Industries Fair:
  chemical exhibitors, 297
  chemical plant exhibits, 143
Building materials, *Siporex*, 94
Burma:
  pharmaceutical project, 374
  pulp and paper project, 60
'Bursting Discs,' symposium, 100

CALCINING lime-bearing sludges, 259
Calcium carbide factory, Kenfig, 368
Canada:
  chemical expansion, 127
  citric acid plant, 155
  cumene-acetone-phenol plant, 265
  nylon plant, 30
  oil pipeline to U.S., extended, 91
  potash deposits, 30
  Sarnia oil refinery, 15
  Shell petrochemical plant, 163
  sulphur production, 265
  Terylene factory, 155
  U.K. pressure vessels, acceptance, 301, 373
'Carbon and Graphite for Chemical Plant,' by A. W. Morrison, B. W. Freedman and P. G. R. Haines, 315
Carbon and graphite for chemical plant (*letter*), 355
Carbon bisulphide manufacture, 296
Carbon black:
  new grades in U.K., 397
  pelleting, 296
'Carbon Dioxide from Fuel Oil,' 83
Carbon dioxide, 'package' plant, 187
Carbon disulphide, continuous production, 260
Carbon-steam system at low temperature, 321
Carbonisation:
  electrical process, 347
  low-temperature processes, 343
Carbons, adsorptive, sulphur in, 321
Cascade, air flow, 323
Catalysis, advances in, 28
'Catalysis,' by S. L. Martin, 248
Catalysts:
  British plant, 297
  for hydrocarbon synthesis, 120
  nickel, 72
  platinum, 222
  sulphur poisoning of nickel, 284
Catalytic cracking:
  air-lift unit, 368
  Sarnia refinery, 16
'Catalytic Desulphurisation,' 180
Cement:
  dust emission from works, 268
  from blast-furnace slag, 300
  Indian industry, 127
  kiln, improved, 258
  Malayan plant, 59
  Sindri, India, plant, 90
  synthetic resin, 137
  works handling plant, 320
'Centrifuging,' by E. Broadwell, 78
Ceylon:
  chemical projects, 186
  State industries, 122
'Chemical Apparatus in the U.S.A.' Comments by Sir H. Hartley, 356

INDEX 1953

VOLUME 34

GUIDE TO PAGE NUMBERS—January, 1-32; February, 33-62; March, 63-92; April, 93-124; May, 125-158; June, 159-188; July, 189-222; August, 223-266; September, 267-302; October, 303-338; November, 339-372; December, 373-406

'ACETIC Anhydride from Acetone,' 283
Acetone from cumene, 265
Acetylene:
  safe handling process, 151
  Wulff manufacturing process, 88
'Acetylene from Hydrocarbons,' 247
Acid handling, safer system, 119
Acid plants, Chemiebau plants to be made in U.K., 88
'Acid Recovery at a Solvents Plant,' 113
ACTH from ox glands, 35
Adsorption, kinetics of exchange, 322
Agricultural chemicals, Australia, 29
Air:
  disposal in radiochemical laboratories, 133
  driers, automatic, 147
  filter, plastic, 31
  control device, 215
Alcohol, French expert prices, 58
Alumina:
  from anorthosite, 305
  Jamaican production, 60
Aluminium:
  Australian production, 20
  Norwegian output, 88
  Norwegian plant, 333
  silver-plating process, 84
  U.S. industry, 157
  Volta River scheme, 2
Aluminium-coated steel, cheap method, 297
Ammonia synthesis, 54
Ammoniacal solutions, distillation, 54
Ammoniation of superphosphate, 196
Ammonium nitrate crystalliser, 172
Ammonium sulphate from petroleum residues, 171
A.P.V. Co.'s new factory, 213
Argentina, chemical expansion, 270
Asian coal and iron reserves, 126
Association of British Chemical Manufacturers, annual report, 368
Atomic energy:
  British programme, 160
  Indian plans, 35, 187
  irradiation of plastics, 340
  nuclear engineering:
    France, 303
    U.S.A., 370
  power station, Cumberland, 219
Australia:
  agricultural chemical production, 29
  ammonia oxidation plant, 60
  bauxite deposits, 90
  industrial projects, 20
  metals prospecting, 90
  uranium field, new, 336
Austria, plastics industry, 122
Autofining desulphurisation process, 180

'BATCH *v.* Continuous Distillation,' by S. R. M. Ellis and J. T. Shelton, 193, 280
Battery separators, 94
Bauxite, Australian discovery, 90
'Beer Conditioning and Cooling Plant, Reconstruction,' by A. G. Thomson, 203
Benzole, standards, 290
Board from wood waste, continuous process, 220
Boilers, research, 184
BOOKS REVIEWED:
  'Absorption and Extraction,' by T. K. Sherwood and R. L. Pigford, 91
  'Advances in Catalysis,' edited by Frankenburg, Komarewsky and Rideal, 28
  'Bibliography of Industrial Drying,' 47
  'Chemical Engineering Techniques,' by B. E. Lauer and R. F. Heckman, 146
  'Chemical Industries,' 23rd edition, 146
  'Engineers' Illustrated Thesaurus,' by H. Herkimer, 24
  'Glycols,' 47
  'Industrial Waste Treatment,' by E. B. Besselievre, 253
  'Introduction to the Study of Physical Chemistry,' by L. P. Hammett, 253
  'Materials Handling in Industry,' 39
  'Modern Chemical Processes,' 91
  'Organic Chemistry,' by L. J. Desha, 253
  'Organophosphorus Compounds,' by G. M. Kosolapoff, 181
  'Physical Chemistry Made Plain,' by J. H. Mandleberg, 181
  'Styrene,' by R. H. Boundy and R. F. Boyer, 150
  'Textbook of Organic Chemistry,' by G. H. Richter, 214
  'Thermal Diffusion in Gases,' by K. E. Grew and T. L. Ibbs, 146
  'Unit Processes in Organic Synthesis,' P. H. Groggins, 146
  'Vermiculite,' by E. R. Varley, 150
Brazil:
  alkali projects, 187
  caustic soda plant, 156
  fertilisers, apatite reserves, 371, 399
  manganese development, 89
  newsprint production plans, 301
Bread, white, new machine dispenses with agene, 86
Brewery reconstruction, 203
Brick kilns, waste heat recovery, 84
Bricks from lime sludge, 221
'British Chemical Plant Industry and Exhibition,' by Dr. E. H. T. Hoblyn, 228
British Industries Fair:
  chemical exhibitors, 297
  chemical plant exhibits, 143
Building materials, *Siporex*, 94
Burma:
  pharmaceutical project, 374
  pulp and paper project, 60
'Bursting Discs,' symposium, 100

CALCINING lime-bearing sludges, 259
Calcium carbide factory, Kenfig, 368
Canada:
  chemical expansion, 127
  citric acid plant, 155
  cumene-acetone-phenol plant, 265
  nylon plant, 30
  oil pipeline to U.S., extended, 91
  potash deposits, 30
  Sarnia oil refinery, 15
  Shell petrochemical plant, 163
  sulphur production, 265
  Terylene factory, 155
  U.K. pressure vessels, acceptance, 301, 373
'Carbon and Graphite for Chemical Plant,' by A. W. Morrison, B. W. Freedman and P. G. R. Haines, 315
Carbon and graphite for chemical plant (*letter*), 355
Carbon bisulphide manufacture, 296
Carbon black:
  new grades in U.K., 397
  pelleting, 296
'Carbon Dioxide from Fuel Oil,' 83
Carbon dioxide, 'package' plant, 187
Carbon disulphide, continuous production, 260
Carbon-steam system at low temperature, 321
Carbonisation:
  electrical process, 347
  low-temperature processes, 343
Carbons, adsorptive, sulphur in, 321
Cascade, air flow, 323
Catalysis, advances in, 28
'Catalysis,' by S. L. Martin, 248
Catalysts:
  British plant, 297
  for hydrocarbon synthesis, 120
  nickel, 72
  platinum, 222
  sulphur poisoning of nickel, 284
Catalytic cracking:
  air-lift unit, 368
  Sarnia refinery, 16
'Catalytic Desulphurisation,' 180
Cement:
  dust emission from works, 268
  from blast-furnace slag, 300
  Indian industry, 127
  kiln, improved, 258
  Malayan plant, 59
  Sindri, India, plant, 90
  synthetic resin, 137
  works handling plant, 320
'Centrifuging,' by E. Broadwell, 78
Ceylon:
  chemical projects, 186
  State industries, 122
'Chemical Apparatus in the U.S.A.' Comments by Sir H. Hartley, 356

Chemical engineer:
and productivity, 356
functions of, 160
Chemical engineering:
careers, 269
European federation, 263
research, 64, 125
Chemical Engineering Conference papers, 307, 312, 315, 356, 377
'Chemical Engineering—Half a Century of Progress,' by J. A. Reavell, 233
'Chemical Engineering Invention,' 27, 54, 86, 120, 151, 182, 218, 259, 296, 337, 401
'Chemical Engineering, Its Place in Modern Industry,' by Sir Harold Hartley, 230
'Chemical Engineering Progress in the U.S.,' by F. J. Curtis, 131
'Chemical Engineering Research at the Massachusetts Institute of Technology,' 321
Chemical Engineering Reviews:
'Catalysis,' by S. L. Martin, 248
'Centrifuging,' by E. Broadwell, 78
'Crystallisation,' by A. W. Bamforth, 171
'Evaporation,' by J. M. Coulson, 197
'Filtration,' by E. L. Streatfield, 44
'Fractional Distillation,' by H. H. M. Jones, 350, 381
'Ion Exchange,' by J. M. Hutcheon, 271
'Metallurgy,' by H. A. Holden, 384
'Mixing,' by D. F. Riley, 67
'Pumping Practice,' by A. Flindle, 103
'Size Reduction,' by R. V. Riley, 8
'Vacuum Technique,' by S. L. Martin, 276
'Chemical Factories—Layout, Construction and Equipment,' 73
'Chemical Glassware Factory Enlarged,' 254
'Chemical Industries of South-west France,' by D. C. Freshwater, 388
Chemical industry:
British expansion plan, 368
Finland, 58
productivity report, 33
U.S. prospects, 36
world expansion, 116
Chemical plant:
British export problems, 161
plastics for, 307
synthetic resin cements, 137
ultrasonic testing, 293
Chemical Plant Exhibition, preview, 235-244
'Chemical Plant Factory,' (A.P.V.), 213
'Chemical Plant for the Plastics Industry,' by H. V. Potter, 232
'Chemical Plant of the Future,' 387
'Chemicals, Coal and Oil in Sterling Area,' 23
Chemicals, European output, 29
'Chemicals Direct from Coal,' 21
'Chemicals from Coke Oven Gases,' 168
Chile:
nitrate controls, 157
threat to nitrate exports, 300, 376
'Chlorine Production with Mercury Cells,' by L. R. Thomas, 312
Chlorobenzene, recovery, 86
Chrysotile, South African deposits, 90
Coal:
briquetting and carbonising processes, 343
carbonising requirements, 66
chemicals direct from, 21, 159
Fischer-Tropsch process, 329
gasification, 291, 374
gasification, underground, in U.K., 297
pipeline projects, 60, 63
Coal (*continued*):
processing research, 297
production in sterling area, 23
'Coal Hydrogenation Chemicals Plant,' 165
Coke from non-coking coals, 305
'Coke Oven Gas as a Raw Material for Chemical Synthesis,' by J. L. Boyle, 40
'Coke Oven Gases, Chemicals from,' 168
Coke oven plant, Partington, 56
Conservation of raw materials, 224
Contractors, legal rights, 392
Copper:
Israel deposits, 58
recovery from pickling sludge, 153
stainless steel clad, 22
Corrosion:
atmospheric, 34
B.I.S.R.A. research, 162
preventives for engineering parts, 95
-proof coatings, preparation, 401
protection, 384
Cost information, use of, 358
Crushing and grinding, 8
Crystal growth, 172
'Crystallisation,' by A. W. Bamforth, 171
Cuba, oil search, 300
Cumene, phenol and acetone from, 265
Cyclised rubber, 340

DEMINERALISATION:
of water, 125, 306
sea water distillery, Aden, 156
'Demineralisation of Salt Waters,' 108, 201
Density control device for viscous liquids, 145
'Deodorisation of Vegetable Oils,' 145
Detergents in sewage, 121
Deville, H. Ste. C., centenary, 4
Diammonium phosphate process, 152
Dilatometry, volume, 3
Distillation:
ammoniacal solutions, 54
batch *versus* continuous, 193, 280
bubble-plate columns, 381
column-still, 218
fractional, review, 350, 381
fractionating towers, 119
'micromolecular' still, 115
packed columns, 352
reflux divider, 183
rotor for centrifugal still, 296
short-path fractionating still, 259
solar still, 270
tall oil, 296
tar, azeotropic, 120
Turbogrid trays, 331
vacuum, of alcoholic liquors, 182
vapour-compression, 182
wetted-wall columns, 381
'Distortion in Welded Vessels,' 7
Domed ends for tanks and pressure vessels, standard, 142
Driers, tray and rotary, drying rates, 49
Dust:
arrester, 256
emission from cement works, 268
explosions in factories, 305
Dye industry in France, 29

'EAST German Chemical Plant Industry,' 129
'Effluent Disposal,' symposium, 217
Effluents:
gas industry, 207
infra-red checking, 43
research, 328
Egypt, fertiliser projects, 264
Electrochemical research, India, 90
Electronic:
computer for process control, 149
repeater, 216
weighing machines, automatic control, 148
Emulsifier, 'vibro-agitation,' 55
'Evaporation,' by J. M. Coulson, 197
Evaporators:
milk, 377
thermo-compression, 218
vapour compression, 260
whey, 182
Exothermic reactions, catalytic control, 120

FACTORY layout, 73
Fan blades, plastic coating, 31
Fan unit for dust and fume extraction, 148
Fats processing plant, Turkey, 58
Fatty acids:
Norwegian plant, 22
separation process, 337
'Fertiliser Manufacture in U.S.A.', by Harry A. Curtis, 251
Fertilisers:
British plant, new, 353
conditioning with surface-active agents, 2
from domestic refuse, 191
Formosa plants, 60
gas works liquor, 128
Italian plant extended, 58
Japanese exports, 30
Pakistan project, 90
price decontrol in U.K., 225
Fibres:
from natural rock, Scottish project, 154
synthetic, Dutch, 89
Filter:
cloth, substitute for, 224
Nordengren tray belt, 353
press, electric, 115
unit for pipelines, 331
'Filtration,' by E. L. Streatfield, 44
Finland:
agricultural chemicals, 224
chemical production and imports, 58, 89
Fire protection, 'packaged' system, 55
'Fischer-Tropsch Process — Progress Report,' 329
Fish by-product processing, 191
Flameproof barrier box, 295
Flexible tube, 87
Flotation processes, tall oil, 13
Flow sheets, simplification, 192
Fluid contacting apparatus, 27
Fluoridation of water, 269
Fluoride, detection in air, 304
Food-preservation engineers, need for, 341
Food research and chemical engineering, 127
Formosa, fertiliser plants, 60
'Fractional Distillation,' by H. H. M. Jones, 350, 381
Fractionating towers, increasing capacity of, 119
France:
dye industry, 29
nuclear engineering, 303
petrochemicals industry, 94
plastics plant, 29
potash refining, 98
S.W., chemical industries, 388
Fuel:
efficiency company, 261
gas manufacturing process, 218
oil, CO_2 from, 83
synthetic, U.S. plants, 138
technology and chemical engineering, 225

Fuel Conservation, 326, 363
Fumaric acid plant, U.K., 29
Furnaces, flame radiation research, 96
Fused silica, history, 226

GAS:
and carbonised fuels, new trends, 66
from sewage, India, 60
producers, automatic control, 367
scrubber, pilot-plant, 121
'Gas Engineering in the U.S.A.', 205
Gases, dehydration, 322
'Gasification of Coal,' 291
Gasworks:
liquor as fertiliser, 128
new British, 56
Gears, reduction, 149
Geiger Muller tube, improved, 26
Gelatin manufacture, 77
Geothermal steam power, 299, 339
'Germanium, Production and Uses,' by J. A. Gay, 175
Germany:
East, chemical plant, 129
West, chemical output, 398
Glue manufacture, 77, 198
Glycerin:
from molasses, 191
substitute, 334
Gold Coast, aluminium project, 2
Graphite in chemical plant, 315
Greases, water-repelling, 269
Greece, sugar and oil projects, 59

HAZARDOUS chemicals, labels, 306
Heat conductivity of metals, 22
'Heat Exchangers, Maintenance and Reconditioning,' by G. E. Halter, 208
Heat exchangers, spiral, 311
Heat recovery:
from brick kilns, 84
in industrial plants, 364
Heat transfer:
coefficients, 199
in rotary driers, 51
in water-cooled tubes, 153
Heater batteries, tube, 256
Heating jackets, gas-purged, 367
Heating mantles for large vessels, 25
Heavy chemicals productivity report, 33
Heavy water production, Norway, 29
Holland:
insecticide plant, 370
modernising fertiliser plants, 119
Humidity controller, 147
Hungary:
cellulose-from-straw factory, 185
natural gas processing plant, 221
steel production, 31
Hydraulic transport, 63
Hydrazine factory, new U.S., 301
'Hydrodesulphurisation,' 285
Hydroextraction, 78
Hydrogen from sulphur hydrocarbons, 86
Hydrogenation, catalysts for, 248
Hydrogenation of coal, U.S. chemical plant, 165
Hydrometers, standard, 258
Hydrostatic contents controller, 295

I.C.I. research programme, 191
Imperial College expansion, 64
India:
atomic energy plans, 35
caustic soda plant, 60
India (*continued*):
cement industry, 90, 127
electrochemical research, 90
explosives project, 373
fertiliser developments, Sindri, 59
heavy chemicals development, 300, 371
plant makers' difficulties, 269
raw film factory, 59
steel industry, 59
synthetic petrol plans, 399
Indonesia, soda plant, 89
Infra-red:
checking of effluents, 43
process stream analyser, 192
Insecticide plant, Holland, 370
Institution of Chemical Engineers:
Davis Memorial Lecture, 342
entrance standards, 155, 159
Instrumentation:
as maintenance technique, 53
in U.S., 75
Instruments standardisation, 298
Ion exchange:
chromate recovery, 255
ion exclusion, 274
'Permselective' membranes, 273
rate of, 321
resins, 85, 273
'Ion Exchange,' by J. M. Hutcheon, 271
'Ion Exchange and Fine Chemicals,' 85
Iraq, chemical industries, 375
Iron:
oxide burner, 136
powder, new process, 335
spheroidal graphite cast, 4
Isotopes, radioactive, electromagnetic separator, 126, *see also* Atomic Energy
Israel:
asbestos plant, 334
Dead Sea chemicals, 224
mineral developments, 58
Italy:
fertiliser plant extended, 58
methane industry, 36
oil developments, 36

JAMAICA:
alumina production, 60
anhydrous alcohol project, 156
Japan:
fertiliser exports, 30, 264
sulphur exports, 30
titanium dioxide plant, 89
urea plant, 30
Johnson, P. N., pioneer metallurgist, 3

KENYA:
cement factory, 123
oil refinery project, 30
sewage pumping plant, 123
Ketones, purification, 151

LABELLING hazardous chemicals, 306
Lactic acid from corn sugar, 198
Lead-casting machine, continuous, 216
Leather-tanning extract, new, 336
'Liabilities towards Contractors,' by C. B. Roos, 392
Lighting units, prism, 26
Liquid transfer unit, 87
Liquid-liquid extraction, 67
Lime burning, 182
Lubricants:
canning plant, 335
long-lasting, 190
valve, 215
Lubrication:
device for pump, 36
maintenance, 53
Luwesta extractor, 79

MACHINE tool industries, 64
Machinery, duty-free imports, 154
Magnesium made corrosion resistant, 153
Maintenance of plant:
productivity team's report, 53
incentive scheme, 375
Malaya:
new cement plant, 59
Unilever factory, 59
Manganese:
Brazilian development, 89
conservation, 342
Yugoslav plant, 59
Massachusetts Institute of Technology, abstracts from theses, 321
Mastic coatings, 53
Materials of construction, Productivity report, 74
Melamine manufacturing process, 120
Mercury cells for chlorine production, 312
'Metallurgy,' by H. A. Holden, 384
Metals, mechanical properties at low temperatures, 323
Methane:
colliery, for domestic use, 304
Italian industry, 36
Milk, source of chemicals, 198
'Milk Processing Plant, Recent Advances,' by J. E. F. Renton, 377
Mills, rod, 294
Mineral wool from sugar waste, 130
Mixers:
design, mechanical aspects, 72
steam-driven stirring gear, 366
vibratory, 55
Mixing:
agitation data, 69
jet, 71
viscous, 70
white bread machine, 86
'Mixing,' by D. F. Riley, 67
Molasses, yeast from, new plant, 288
Molybdenum restrictions lifted by O.E.E.C., 333

NAPHTHALENE, U.S. production target, 61
Natural gas:
processing, France, 388
U.K. search planned, 219
underground storage in U.S., 123
New Zealand:
geothermal power station, 299, 339
heavy water project, 299, 339
scheelite production, 300
sulphur purchases, 123
Nickel:
carbonyl, discovery, 263
cracking catalysts, 72
plating process, 157
production research, 156
Nicotine sulphate from tobacco, India, 157
Niobium mine, Norway, 220
Nitric oxide, new process, 102
Nitrogen separation plants, 65
Non-ferrous ore dressing, 245
Norway:
aluminium plant, 333
chemical industries, 189
fatty acids plant, 22
heavy water production, 29

Norway (*continued*):
iron pelleting unit, 300
Norsk Hydro projects, 58
ore production, 88
rayon plant, 58
Nuclear engineering, *See* Atomic energy
Nylon, soluble, 29

'OIL Refinery in Ontario, New,' by E. A. Smith and F. J. Maslyk, 15
Oilseeds, filtration-extraction, 374
Onnes, H. K., centenary, 268
Ores:
dressing, magnetic, 333
low-grade, utilisation, 184
'Ores, Non-Ferrous, Modern Dressing Techniques,' 245
Oxidation processes, conference, 334
Oxygen generator, portable, 332

PACKAGING granular materials, 85
Paints:
drying process, 4
temperature indicating, 216
Pakistan:
chemical research laboratories planned, 336
fertiliser plant, 30
Khewra Soda Co., 265
paper mills project, 59
soda and fertiliser projects, 90
sulphur refinery, 90
Paper:
kraft, New Zealand production, 336
new raw materials, 376
Patent Office, London, centenary, 34
Peat, heat-resistant, 156
Pelleting:
carbon black, 296
petrol, 35
'Penicillin and Streptomycin Production,' 324
Pentaerythritol, Canadian production, 336
Perlon (synthetic fibre) plant, 152
Petrol, pelleted, 35
Petroleum:
Autofining desulphurisation process, 180
Brazilian expansion, 89
chemicals:
Shell's Canadian plant, 163
French industry, 94
oil industry and, 223
petrochemical laboratory, U.S., 60
cracking process, 260
Greek project, 59
hydrodesulphurisation, 285
Indian deposits, 90
Italian deposits, 36
Mexican production target, 89
platformer, world's largest, 302
pyridines from, 330
refineries:
Coryton, 368
Australia, 91
Turkey, 89
Kenya, 30
Ontario, 15
sterling area production, 24
sulphonate, 255
sulphur extraction plants, British 267
U.S.-Canada pipeline, 91
vacuum flasher, California, 158
'Petroleum Chemicals in U.S.A.,' by M. Buck, 97
*p*H indicator, multi-electrode, 256
*p*H meter, 87
Pharmaceutical engineering in Britain, 65
Phenol:
from air and oil, 266
from cumene, 265
Philippines:
fertiliser plant, 336
salt projects, 30
Phosphate glasses, manufacture, 337
Phosphate reserves, Venezuela, 90
'Phosphoric Acid Plant, New,' 353
Phurnacite process, 343
Pipelines for coal, 63
'Plant Maintenance Techniques,' 52
Plastics:
coating for fan blades, 31
French plant, 29
from codfish waste, 220
irradiation in atomic pile, 340
moulding, pre-plasticising machine, 366
Porvic, 94
synthetic resin cements, 137
tanks for alum manufacture, 149
Vybak rigid PVC sheet, 366
Other plastics are indexed under own names
'Plastics and Chemical Plant,' by V. Evans, 307
Pollution:
control, O.E.E.C. mission, 93, 397
water, research, 328
Polymerisation process, 401
Polythene:
film factory, U.K., 261
waxes, new, 61
welding, 5
Portugal, fertiliser production, 185
Potash from sea water, 58
'Potash Refining in France,' 98
Potentiometer, portable, 183
Pressure vessels:
Canadians accept U.K. standards, 301, 373
domed ends, standard, 142
testing, 65
Process control:
American practice, 75
for reducing maintenance, 53
Process stream analyser, 192
Productivity:
chemical engineer and, 358
Heavy Chemicals Team report, 73
Propane-fuelled locomotive, 334
Propylene glycol, new plant, U.K., 121
Protein extraction mill, 161
P.T.F.E. coating for rollers, 183
Pulp-from-bagasse plant, 301
Pulp process, cheaper, Canada, 265
'Pumping Practice,' by A. Flindle, 103
Pumps:
glandless, 25
lubrication device, 36
metering, cam-operated, 332
seals, packings and joints, 103
PVC welding, 5
Pyridines from petroleum, 330
Pyrites:
flash-roasting plant for acid manufacture, 37
'Pyrites Mining and Preparation,' 48

QUICKFIT & QUARTZ, glassware factory, 254

RADIOCHEMICAL laboratories, air disposal, 133
Radiography, for testing pressure vessels, 65
Radium, new purification process, 371
'Rates of Drying in Tray and Rotary Driers,' by J. P. Duffy, 49
Rayon:
Australian production, 20
Norwegian plant, 58
Refractory, plastic, 115
Relay, heavy-duty, 87
Rubber:
cellulose spirit, from, 58
cyclised, 340
lining for reservoir, 297
synthetic:
Carbex process, 158
cold rubber ingredient, new, 335
Japanese project, 186
U.S. production increased, 61
Vulcollan, 35
Rumford, Count, bicentenary, 128

'SAFE Disposal of Contaminated Air from Radiochemical Laboratories,' by J. W. J. Fay, 133
Salt:
Philippines production plans, 30
production methods, 172
Scale, electronic, 149
Seaweed processing factory, Orkney, 155
Sewage gas, India, 60
Shell's chemical plants, 262
Sifter:
dust-proof, 149
for granules, 215
Silicon made by new process, 266
Silver-plated aluminium, 84
Size reduction:
angle disintegrator, 396
comminuting mill, 115
crushing high-silica rock, 331
rod mills, 294
'Size Reduction,' by R. V. Riley, 8
Sludge, activated, biology, 322
'Smokeless Fuel Manufacture,' by R. J. S. Jennings, 343
'Soap Stock Conversion Plant,' 257
'Solar Energy, Utilisation of,' 140
Solar stills for irrigation, 270
Solvent extraction plant, 27
'Solvents Produced in Canada,' 163
South Africa:
chrysotile deposits, 90
limestone discovery, 156
phosphate project, 122
soap plants, 122
uranium plant, 90
wood pulp from eucalyptus, 123
Spain, chemicals, oil and metals output, 122
Specific gravity tester, 256
Stainless-steel-clad copper vessels, 22
Starch from banana stems, 59
Steam conservation in factories, 363
Steel:
boron-treated, 384
for sulphate digesters, 371
Hungarian production, 31
Streptomycin manufacture, 324
Suction handling of phosphate rock, 398
Sugar:
crystallisation, 401
Greek factory, 59
Sulphidic zinc ore, roasting, 401
Sulphur:
Committee dissolved, 155
controls relaxed in U.K., 88
from low-grade ores, U.S. plant, 157, 336
from oil, British plants, 267
hydrodesulphurisation, 285
Japanese export plan, 30
Mexican plant, 89
Pakistan refinery, 90
U.S.A. production, 91

Sulphur dichloride in paints, 4
Sulphur dioxide, pure, production, 321
Sulphuric acid:
  Kachkaroff-Guareschi process, 190, 259
  recovery in solvents plant, 113
  recovery, research on, 162
'Sulphuric Acid from Flash-Roasted Pyrites,' 37
Superphosphate, ammoniation of, 196
Swarf recovery, magnetic, 396
Sweden, pyrites mine, 88
'Synthetic Liquid Fuel Plants,' 138
'Synthetic Resin Cements in Chemical Engineering,' 137

'TALL Oil in Flotation Processes,' 13
Tallow as palm oil substitute, 334
Tar:
  azeotropic distillation, 120
  distillation plants, National Coal Board, 57
Television water-gauge indicator, 295
Temperature:
  control relay, 115
  -indicating paints, 216
Terylene synthetic fibre:
  British plant, 261
  Canadian plant, 155
  French production licensed, 369
  German production licensed, 398
  Italian production licensed, 336
Timing device, electric, 396
Tin:
  ores, extraction, 86
  research report, 262
Titanium dioxide factory, Japan, 89
Titanium metal:
  British project, 279
  cast shapes, 341
  future prospects, 66
  manufacture, 278
  U.S. projects, 341
Turkey:
  acid and superphosphate plants, 121
  fertiliser project, 300
  oil refinery, 89
  Unilever factory, 58

'ULTRASONIC Testing of Welded Chemical Plant,' 293
Ultrasonics:
  flaw detector, 147
  generators, 360
  in cellulose production, 338
'Ultrasonics in Industry,' by M. H. M. Arnold, 360
University theses, publication of, 304
Uranium:
  Australian field, new, 336
  recovery in U.S.A., 161
  recovery process, new, 60
  South African project, 90
Urea plant, Japan, 30
U.S.A.:
  acid and sulphur targets, 91
  acrylonitrile expansion, 302, 335
  alcohol butadiene plant, 61
  aluminium industry, 157
  ammonia plant, 60
  chemical engineering progress, 131
  chemical exposition, 334
  chemical factory organisation, 73
  chemical imports 'threat,' 186
  chemical industry:
    expansion, 1
    future prospects, 36
  chemical prices, 124
  coal hydrogenation plant, 165
U.S.A. (*continued*):
  coal pipeline, 60
  fertiliser manufacture, 251
  gas engineering report, 205
  glycerin production target, 334
  heavy chemicals production, 33
  naphthalene target raised, 61
  petrochemicals:
    industry, 97
    research, 61
  plant maintenance, 52
  uranium recovery:
    new process, 60
    research, 161

VACUUM:
  greaseless stopcock, 278
  metallurgy, 278
  gauges, 276
'Vacuum Technique,' by S. L. Martin, 276
Valves:
  hydrodynamics study, 323
  line blind, 294
  lubricant, 215
  position indicator, 26
Vanilla from waste liquors, Canada, 60
Vapour-compression distillation, 182
Vapour recompression for salt manufacture, 198
Vegetable oils, deodorisation, 145
Venezuela, phosphate reserves, 90
Vermiculite, properties and uses, 150
Vibration:
  generators, 332
  tester, 183
Vibratory:
  feeder, 55
  mixer and emulsifier, 55
Vinyl acetate project, Texas, 157
Viscose preparation, 337
Viscosity standard, 298
Vulcollan synthetic rubber, 35

WASHERS, synthetic rubber, 218
'Wastage of Energy in Factories,' 363
Waste, industrial, utilisation, 95
Water:
  demineralisation, 108, 125, 201
  fluoridation, 269
  gauge indication, TV, 295
'Water Pollution Research,' 328
Welded vessels, distortion, 7
Welding:
  Argonarc process, 55
  electrode holder, 87
  electrodes, 216
  positioner, balanced, 215
'Welding Polythene and PVC,' by C. Fisher, 5
Whey evaporator, 182
Wood waste:
  board manufacture, 220
  briquetting, 95
Wool grease products in Australia, 90
Work study, 358
'World Chemical Industry Expansion,' 116
Worn parts, reclamation, 52
Wrench, impact, 52

'YEAST from Molasses,' 288
Yugoslavia:
  paper industry expansion, 370
  manganese plant, 59

ZIRCONIUM manufacture, 278

AUTHOR INDEX

Arnold, M. H. M., 'Ultrasonics in Industry,' 360
Bamforth, A. W., 'Crystallisation,' 171
Boyle, J. L., 'Coke Oven Gas as a Raw Material for Chemical Synthesis,' 40
Broadwell, E., 'Centrifuging,' 78
Buck, M., 'Petroleum Chemicals in U.S.A.', 97
Coulson, J. M., 'Evaporation,' 197
Curtis, F. J., 'Chemical Engineering Progress in the U.S.A.', 131
Curtis, H. A., 'New Trends in Fertiliser Manufacture in the U.S.', 251
Duffy, J. P., 'Rates of Drying in Tray and Rotary Driers,' 49
Ellis, S. R. M., 'Batch *v.* Continuous Distillation,' 193, 280
Evans, V., 'Plastics and Chemical Plant,' 307
Fay, J. W. J., 'Safe Disposal of Contaminated Air from Radiochemical Laboratories,' 133
Fisher, C., 'Welding Polythene and PVC,' 5
Flindle, A., 'Pumping Practice,' 103
Freedman, B. W., 'Carbon and Graphite for Chemical Plant,' 315
Freshwater, D. C., 'Chemical Industries of South-west France,' 388
Gay, J. A., 'Production and Uses of Germanium,' 175
Haines, P. G. R., 'Carbon and Graphite for Chemical Plant,' 315
Halter, G. E., 'Maintenance and Reconditioning of Heat Exchangers,' 208
Hartley, Sir Harold, 'The Place of Chemical Engineering in Modern Industry,' 230
Hoblyn, Dr. E. H. T., 'British Chemical Plant—The Industry and the Exhibition,' 228
Holden, H. A., 'Metallurgy,' 384
Hutcheon, J. M., 'Ion Exchange,' 271
Jennings, R. J. S., 'Smokeless Fuel Manufacture,' 343
Jones, H. H. M., 'Fractional Distillation,' 350, 381
Martin, S. L.:
  'Vacuum Technique,' 276
  'Catalysis,' 248
Maslyk, F. J., 'New Oil Refinery in Ontario,' 15
Morrison, A. W., 'Carbon and Graphite for Chemical Plant,' 315
Potter, H. V., 'Chemical Plant for the Plastics Industry,' 232
Reavell, J. A., 'Half a Century of Progress,' 233
Renton, J. E. F., 'Recent Advances in Milk Processing Plant,' 377
Riley, D. F., 'Mixing,' 67
Riley, R. V., 'Size Reduction,' 8
Roos, C. B., 'Contractors: Legal Obligations of the Chemical Engineer,' 392
Shelton, J. T., 'Batch *v.* Continuous Distillation,' 193, 280
Smith, E. A., 'New Oil Refinery in Ontario,' 15
Streatfield, E. L., 'Filtration,' 44
Thomas, L. R., 'Chlorine Production with Mercury Cells,' 312
Thomson, A. G., 'Reconstruction of a Beer Conditioning and Cooling Plant,' 203